

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. <b>29926/39505</b>	
First Inventor	Young-Soo Kim
Title	ATOMIC LAYER DEPOSITION OF TITANIUM NITRIDE USING BATCH TYPE CHAMBER AND METHOD FOR FABRICATING CAPACITOR, etc.
Express Mail Label No.	EV323774982US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1.  Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original, and a duplicate for fee processing)*
2.  Applicant claims small entity status.  
See 37 CFR 1.27.
3.  Specification [Total Pages **19**]   
*(preferred arrangement set forth below)*  
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (*if filed*)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4.  Drawing(s) (35 U.S.C. 113) [Total Sheets **10**]
5. Oath or Declaration [Total Sheets **2**]  
 a.  Newly executed (original or copy)  
 b.  Copy from a prior application (37 CFR 1.63(d))  
*(for continuation/divisional with Box 18 completed)*  
 i.  **DELETION OF INVENTOR(S)**  
*Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).*
6.  Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:** MS Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8.  Nucleotide and/or Amino Acid Sequence Submission  
*(if applicable, all necessary)*
- a.  Computer Readable Form (CRF)
- b. Specification Sequence Listing on:  
 i.  CD-ROM or CD-R (2 copies); or      ii.  Paper
- c.  Statements verifying identity of above copies

**ACCOMPANYING APPLICATIONS PARTS**

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(b) Statement  Power of Attorney  
*(when there is an assignee)*
11.  English Translation Document (*if applicable*)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503)  
*(Should be specifically itemized)*
15.  Certified Copy of Priority Document(s)  
*(if foreign priority is claimed)*
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i).  
Applicant must attach form PTO/SB/35 or its equivalent.
17.  Other: \_\_\_\_\_

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation     Divisional     Continuation-in-part (CIP)    of prior application No.: \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_

Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

<input checked="" type="checkbox"/> Customer Number or Bar Code Label	04743		or <input checked="" type="checkbox"/> Correspondence address below
Name	MARSHALL, GERSTEIN & BORUN Michael R. Hull		
Address	233 S. Wacker Drive, Suite 6300 Sears Tower		
City	Chicago	State	IL
Country	US	Telephone	(312) 474-6300

Name (Print/Type)	Keith R. Jarosik	Registration No. (Attorney/Agent)	47,683
Signature			Date
			July 8, 2003

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV323774982US, in an envelope addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: July 8, 2003

Signature: 

(Richard Zimmermann)

17119 U.S. PTO  
07/08/03

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$ 750.00)

Complete if Known	
Application Number	Not Yet Assigned
Filing Date	Concurrently Herewith
First Named Inventor	Young-Soo Kim
Examiner Name	Not Yet Assigned
Art Unit	N/A
Attorney Docket No.	29926/39505

17853 U.S. PTO  
07/08/03

METHOD OF PAYMENT (check all that apply)				FEE CALCULATION (continued)																																																																																																																																																																																																																																					
<input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None <input type="checkbox"/> Deposit Account Deposit Account Number 13-2855 Deposit Account Name MARSHALL, GERSTEIN & BORUN The Director is hereby authorized to: (check all that apply) <input type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.				<b>3. ADDITIONAL FEES</b> <table border="1"> <thead> <tr> <th>Large Entity</th> <th>Small Entity</th> <th colspan="4">Fee Description</th> <th>Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> <th colspan="2"></th> <th></th> </tr> </thead> <tbody> <tr> <td>1051</td> <td>130</td> <td>2051</td> <td>65</td> <td colspan="2">Surcharge – late filing fee or oath</td> <td></td> </tr> <tr> <td>1052</td> <td>50</td> <td>2052</td> <td>25</td> <td colspan="2">Surcharge – late provisional filing fee or cover sheet.</td> <td></td> </tr> <tr> <td>1053</td> <td>130</td> <td>1053</td> <td>130</td> <td colspan="2">Non-English specification</td> <td></td> </tr> <tr> <td>1812</td> <td>2,520</td> <td>1812</td> <td>2,520</td> <td colspan="2">For filing a request for ex parte reexamination</td> <td></td> </tr> <tr> <td>1804</td> <td>920*</td> <td>1804</td> <td>920*</td> <td colspan="2">Requesting publication of SIR prior to Examiner action</td> <td></td> </tr> <tr> <td>1805</td> <td>1,840*</td> <td>1805</td> <td>1,840*</td> <td colspan="2">Requesting publication of SIR after Examiner action</td> <td></td> </tr> <tr> <td>1251</td> <td>110</td> <td>2251</td> <td>55</td> <td colspan="2">Extension for reply within first month</td> <td></td> </tr> <tr> <td>1252</td> <td>410</td> <td>2252</td> <td>205</td> <td colspan="2">Extension for reply within second month</td> <td></td> </tr> <tr> <td>1253</td> <td>930</td> <td>2253</td> <td>465</td> <td colspan="2">Extension for reply within third month</td> <td></td> </tr> <tr> <td>1254</td> <td>1,450</td> <td>2254</td> <td>725</td> <td colspan="2">Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>1255</td> <td>1,970</td> <td>2255</td> <td>985</td> <td colspan="2">Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>1401</td> <td>320</td> <td>2401</td> <td>160</td> <td colspan="2">Notice of Appeal</td> <td></td> </tr> <tr> <td>1402</td> <td>320</td> <td>2402</td> <td>160</td> <td colspan="2">Filing a brief in support of an appeal</td> <td></td> </tr> <tr> <td>1403</td> <td>280</td> <td>2403</td> <td>140</td> <td colspan="2">Request for oral hearing</td> <td></td> </tr> <tr> <td>1451</td> <td>1,510</td> <td>1451</td> <td>1,510</td> <td colspan="2">Petition to institute a public use proceeding</td> <td></td> </tr> <tr> <td>1452</td> <td>110</td> <td>2452</td> <td>55</td> <td colspan="2">Petition to revive – unavoidable</td> <td></td> </tr> <tr> <td>1453</td> <td>1,300</td> <td>2453</td> <td>650</td> <td colspan="2">Petition to revive - unintentional</td> <td></td> </tr> <tr> <td>1501</td> <td>1,300</td> <td>2501</td> <td>650</td> <td colspan="2">Utility issue fee (or reissue)</td> <td></td> </tr> <tr> <td>1502</td> <td>470</td> <td>2502</td> <td>235</td> <td colspan="2">Design issue fee</td> <td></td> </tr> <tr> <td>1503</td> <td>630</td> <td>2503</td> <td>315</td> <td colspan="2">Plant issue fee</td> <td></td> </tr> <tr> <td>1460</td> <td>130</td> <td>1460</td> <td>130</td> <td colspan="2">Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>1807</td> <td>50</td> <td>1807</td> <td>50</td> <td colspan="2">Processing fee under 37 CFR 1.17(q)</td> <td></td> </tr> <tr> <td>1806</td> <td>180</td> <td>1806</td> <td>180</td> <td colspan="2">Submission of Information Disclosure Stmt</td> <td></td> </tr> <tr> <td>8021</td> <td>40</td> <td>8021</td> <td>40</td> <td colspan="2">Recording each patent assignment per property (times number of properties)</td> <td></td> </tr> <tr> <td>1809</td> <td>750</td> <td>2809</td> <td>375</td> <td colspan="2">Filing a submission after final rejection (37 CFR 1.129(a))</td> <td></td> </tr> <tr> <td>1810</td> <td>750</td> <td>2810</td> <td>375</td> <td colspan="2">For each additional invention to be examined (37CFR 1.129(b))</td> <td></td> </tr> <tr> <td>1801</td> <td>750</td> <td>2801</td> <td>375</td> <td colspan="2">Request for Continued Examination (RCE)</td> <td></td> </tr> <tr> <td>1802</td> <td>900</td> <td>1802</td> <td>900</td> <td colspan="2">Request for expedited examination of a design application</td> <td></td> </tr> <tr> <td colspan="4">Other fee (specify)</td> <td colspan="4"></td> </tr> <tr> <td colspan="4">SUBTOTAL (1) (\$ 750.00)</td> <td colspan="4">SUBTOTAL (3) (\$)</td> </tr> </tbody> </table>				Large Entity	Small Entity	Fee Description				Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)				1051	130	2051	65	Surcharge – late filing fee or oath			1052	50	2052	25	Surcharge – late provisional filing fee or cover sheet.			1053	130	1053	130	Non-English specification			1812	2,520	1812	2,520	For filing a request for ex parte reexamination			1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action			1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action			1251	110	2251	55	Extension for reply within first month			1252	410	2252	205	Extension for reply within second month			1253	930	2253	465	Extension for reply within third month			1254	1,450	2254	725	Extension for reply within fourth month			1255	1,970	2255	985	Extension for reply within fifth month			1401	320	2401	160	Notice of Appeal			1402	320	2402	160	Filing a brief in support of an appeal			1403	280	2403	140	Request for oral hearing			1451	1,510	1451	1,510	Petition to institute a public use proceeding			1452	110	2452	55	Petition to revive – unavoidable			1453	1,300	2453	650	Petition to revive - unintentional			1501	1,300	2501	650	Utility issue fee (or reissue)			1502	470	2502	235	Design issue fee			1503	630	2503	315	Plant issue fee			1460	130	1460	130	Petitions to the Commissioner			1807	50	1807	50	Processing fee under 37 CFR 1.17(q)			1806	180	1806	180	Submission of Information Disclosure Stmt			8021	40	8021	40	Recording each patent assignment per property (times number of properties)			1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))			1810	750	2810	375	For each additional invention to be examined (37CFR 1.129(b))			1801	750	2801	375	Request for Continued Examination (RCE)			1802	900	1802	900	Request for expedited examination of a design application			Other fee (specify)								SUBTOTAL (1) (\$ 750.00)				SUBTOTAL (3) (\$)			
Large Entity	Small Entity	Fee Description				Fee Paid																																																																																																																																																																																																																																			
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																																																																						
1051	130	2051	65	Surcharge – late filing fee or oath																																																																																																																																																																																																																																					
1052	50	2052	25	Surcharge – late provisional filing fee or cover sheet.																																																																																																																																																																																																																																					
1053	130	1053	130	Non-English specification																																																																																																																																																																																																																																					
1812	2,520	1812	2,520	For filing a request for ex parte reexamination																																																																																																																																																																																																																																					
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																																																																																					
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																																																																					
1251	110	2251	55	Extension for reply within first month																																																																																																																																																																																																																																					
1252	410	2252	205	Extension for reply within second month																																																																																																																																																																																																																																					
1253	930	2253	465	Extension for reply within third month																																																																																																																																																																																																																																					
1254	1,450	2254	725	Extension for reply within fourth month																																																																																																																																																																																																																																					
1255	1,970	2255	985	Extension for reply within fifth month																																																																																																																																																																																																																																					
1401	320	2401	160	Notice of Appeal																																																																																																																																																																																																																																					
1402	320	2402	160	Filing a brief in support of an appeal																																																																																																																																																																																																																																					
1403	280	2403	140	Request for oral hearing																																																																																																																																																																																																																																					
1451	1,510	1451	1,510	Petition to institute a public use proceeding																																																																																																																																																																																																																																					
1452	110	2452	55	Petition to revive – unavoidable																																																																																																																																																																																																																																					
1453	1,300	2453	650	Petition to revive - unintentional																																																																																																																																																																																																																																					
1501	1,300	2501	650	Utility issue fee (or reissue)																																																																																																																																																																																																																																					
1502	470	2502	235	Design issue fee																																																																																																																																																																																																																																					
1503	630	2503	315	Plant issue fee																																																																																																																																																																																																																																					
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																																																																																					
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																																																																																					
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																																																																																					
8021	40	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																																																																																					
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																																																																																					
1810	750	2810	375	For each additional invention to be examined (37CFR 1.129(b))																																																																																																																																																																																																																																					
1801	750	2801	375	Request for Continued Examination (RCE)																																																																																																																																																																																																																																					
1802	900	1802	900	Request for expedited examination of a design application																																																																																																																																																																																																																																					
Other fee (specify)																																																																																																																																																																																																																																									
SUBTOTAL (1) (\$ 750.00)				SUBTOTAL (3) (\$)																																																																																																																																																																																																																																					
<small>*Reduced by Basic Filing Fee Paid</small>																																																																																																																																																																																																																																									

\*\* or number previously paid, if greater; For Reissues, see above

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Keith R. Jarosik ~	Registration No. (Attorney/Agent)	47,683	Telephone	(312) 423-3454
Signature				Date	July 8, 2003

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV323774982US, in an envelope addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: July 8, 2003

Signature:

(Richard Zimmermann)

Application No. (if known): Not Yet Assigned

Attorney Docket No.: 29926/39505

## Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EV323774982US in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on July 8, 2003  
Date



Signature

Richard Zimmerman  
Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

IDS (Citation) by Applicant